

Effective Use of an Innovative Learning Method: A Perspective from a Sri Lankan Setting

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Abstract

Introduction: Numerous medical schools have incorporated humanities and narrative medicine into their curricula to cultivate compassion and foster essential interpersonal abilities in medical students. These progressive educational approaches prove effective in cultivating empathy, ethical conduct, and professionalism among future healthcare practitioners.

Methods: This qualitative study was conducted at the Faculty of Medicine, University of Kelaniya to study the effectiveness of an innovative learning method in enhancing active learning, critical thinking and personal professional development amongst first-year medical students. Newly graduated medical students, following exposure to a Training of the Trainer (TOT) program, served as facilitators for the training program, and insights from facilitators were gathered through audio-recorded focus group discussions. Following this, a thematic analysis was conducted to explore the interplay and correlations among the identified domains.

Results: The study revealed that facilitators experienced a sense of empowerment after participating in the facilitator training program. They acknowledged that learning about learning itself was a novel experience, which they hadn't encountered during their time as students. Further, the findings indicated that junior medical graduates can successfully undergo training to facilitate a combination of five innovative active learning methods aimed to boost critical thinking and personal professional development among fresh medical students, resulting in high levels of acceptance and satisfaction among the facilitators.

Conclusion: The results of this study support the idea that training facilitators can improve their skills in delivering programs that promote critical thinking and active learning among first-year medical graduates. Feedback from newly graduated medical professionals acting as facilitators indicated that with enthusiasm and motivation, junior healthcare workers could be successfully trained to facilitate in settings with limited resources.

Keywords: Innovative learning, Sri Lanka, Medical students

Introduction

Modern-day medicine is focused on providing patient-centred care as opposed to traditional

practice that was focused more on the disease-centred care. In this purview, the clinicians and the medical students who aspire to be clinicians must not only apply scientific knowledge and skills but also comprehend and address patients' emotional and psychological needs (Oyebode, 2010). Embracing medical humanities can equip medical students and practitioners with the necessary insights to navigate these aspects of

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patient care. Patients often feel empowered when their feelings, ideas, expectations and psychological experiences are given attention by the clinicians (Liao & Wang, 2020).

Many medical schools have adopted humanities and narrative medicine to their medical curricula in order to train medical students to be humane and develop necessary interpersonal skills (Tai 2000). These innovative learning methods can be effectively used to promote empathy, ethical practices and professionalism among medical students (Stratta, 2016). Similar to narratives, forum theatre also is an innovative learning method through which medical students and clinicians are empowered with empathy, cultural competency and communication skills (Schombs, 2023).

This qualitative study aimed to study the facilitators' perspectives following implementation of an innovative learning method in enhancing active learning, critical thinking and personal professional development in a batch of first-year medical students.

Methodology

This qualitative study was conducted at the Faculty of Medicine, University of Kelaniya to study the effectiveness of an innovative learning method in enhancing active learning, critical thinking and personal professional development amongst first-year medical students. The study was conducted including the facilitators of the training program. Newly graduated medical students soon after the completion of MBBS program were selected the facilitators and were eligible to participate in the study.

The medical graduates were initially trained to be trainers following a TOT (training of trainers) program that was delivered over two days as 1-day on-line and 1-day on-site face-to-face training workshop. The contents of the training workshop

were designed at stimulating critical thinking and active learning through five different interactive training sessions delivered to first-year medical students (medical school new comers) during their orientation program. These learning experiences included reading a paragraph, describing a picture, writing a narrative, role play with a simulated actor and forum theatre. The outline of the context of the learning program is illustrated in Table 1.

All participants were assigned as facilitators for the two-day innovative training program delivered to 204 first-year medical students during their orientation program. On day 1, the students were grouped to five clusters of 40-41 medical students and five subgroups within each group was trained to master one of five learning methods that promoted critical thinking, active learning and personal professional development. These learning experiences are illustrated on table 1. On day 2 of the program, the student groups were reshuffled so that each group of 40-41 medical students were exposed to all five types of learning experiences either as performers or observers. The observers were encouraged to create and promote discussion and spot explicit and implicit information within each experience. This activity was facilitated by the study participants in pairs after completion of their TOT program. The investigators observed the interaction and engagement of the facilitators while the training program was being conducted.

The qualitative study was conducted parallel to the delivery of the innovative training program and the eligible participants were those medical graduates who attended the entire TOT course and contributed to the medical students' training program as facilitators. The participants were selected to the FGDs by purposive sampling and all medical graduates who were trained to be resource persons and subsequently, participated in the training program for training medical students were recruited.

Table 01: The outline of the context of the learning program aimed at enhancing active learning, critical thinking and personal professional development in first-year medical students

Activity/experience (ILO)	Students' engagement	Output
1. Reading a paragraph	- Reading a paragraph with appropriately difficult, and authentic. - Develop a summary of the content. (explicit) - Describe implicit knowledge - Explore beyond what is expressed - Plan to do a presentation	Presentation day 1. Introduce a colleague with positive comments 2. Do a presentation 3. Lead a discussion 4. Induce reflective learning 5. Engage in an appreciative inquiry 6. Receive feedback
2. Describing a picture	- Study a picture and describe what you see - Explore underline possibilities - Explore possible implications and develop theories, concepts and research ideas - Planning a session to teach	
3. Writing a narrative	- Enrich the given sequence events in to a narrative to express psychosocial emotional and spiritual back ground - Explore and predict predicaments of all characters and health care providers - How can you help and develop concepts and research? - Recognition of ILO and Planning a teaching session	
4. Role play with simulated actor	- Develop a role play activity based on above story - Predict emotions feelings and predicaments of characters - Train to express those emotions and feeling - Predict learning outcomes - Plan a teaching session	- Lead an experiential learning session - Ability recognizer good behaviors Appreciation of good behaviors - Giving feedback
5. Forum theater	- Students recognize a relevant and critical social issue - Recognize characters - Train them to role play what is not acceptable and what is acceptable - Plan how to run the forum theater - Predict possible ILO - Plan how to conduct the session	- Play the 5-7-minute dram - Invite thee group to explore its character - Invite spectators to become actors - Appreciate their capacity to recognize good from bad - Express gratitude

The FGDs were conducted by the trainers of the TOT program and discussions were encouraged in the following domains.

1. Participants' experience of the new teaching method
2. Participants' feedback on the effectiveness of the facilitation process
3. Novel methods of preparation for university learning
4. Overall program effectiveness

However, the participants were encouraged express their ideas, beliefs, expectations beyond these themes and if a key issue was identified, the participants were encouraged to elaborate such key issues in detail. The discussions were continued until thematic saturation was achieved in each domain. The discussions were audio-recorded at the time of the FGDs and subsequently, the audio-records were transcribed. The transcriptions were initially subjected to content analysis. Utilizing the triangulation of perspectives, essential themes

within the empirical data were identified through an iterative process. A thematic analysis was performed subsequently, to examine the interaction and associations of selected domains.

Informed written consent was obtained from all study participants prior to FGDs. The FGDs were conducted for the purpose of obtaining structured feedback from the facilitators following conclusion of the training program. The training program was part of the orientation program for the batch of first-year medical students (2024 January - February) at the Faculty of Medicine, University of Kelaniya and the program was endorsed by the Dean, Faculty of Medicine, University of Kelaniya.

Results

Nine medical graduates who met the eligibility criteria and consented to take part in FGDs were evaluated. While interviewing the facilitators, the investigators followed an approach with a pragmatic lineage marked by introspection and self-evaluation, embracing creativity and innovation. The objective of the analysis was to comprehend the facilitators' experience and their reflections on their facilitation work. Content evaluation followed by thematic analysis of the participants' verbatims identified several key themes and patterns.

1. First-time experience and comparison with previous activities: Participants discussed their first-time experience in the group, highlighting it as a "first time experience." They compared this experience with previous activities, noting differences in the extent of activities and variety provided. The previous activities mentioned include presentations where solutions were devised and presented to a group.

"It was my first experience and we have not experienced a variety of activities of this nature during our previous learning-teaching activities. The on-site and on-line training we had prior to facilitation was helpful in adapting to the role of the facilitator effectively."

2. Effectiveness of the facilitation process: Participants reflected on the effectiveness of the facilitation process. They mention enjoying the process and expressed that it was effective. Effectiveness was attributed to the active involvement of medical students in collecting information and engaging in activities beyond traditional information delivery formats such as lectures. Active involvement was defined as participants' efforts to find information, gather facts, and read around the topic in preparation for presentation of such information.

"Rather than in a lecture, they actively involved in gathering and processing information. This encouraged self-learning and I think was more effective for lifelong learning."

"University learning is different from school learning and these activities gave the medical students an opportunity to as to what is expected through university learning"

"They were not perfect but with some guidance they were able to do it. Sometimes we had to guide them to improve the clarity of what is explicit and implicit."

"As medical students, we did not have a similar program. Straightaway, we were directed to lectures. We did not have any idea of critical thinking. We did not learn how to learn as medical students. That was a great opportunity. Moreover, the students' engagement was beyond our expectation."

As part of the orientation program, medical school new comers were also exposed to the clinical settings to experience what they we will learn in future during their clinical rotations. One facilitator was quoted on this experience of the students.

"Early clinical experience was the cake and this program was the cherry on the top."

"Opportunity for self-realisation and reflection of their own strengths and weaknesses was crucial

in personal professional development. The program stimulated creativity and teamwork skills in medical students that are useful skills for their five years of learning in the medical school.”

Novel methods for preparation for university learning

Participants discussed how the facilitation process served as an introduction to university learning. They noted that university learning differs from school learning, particularly in terms of independent reading and analysis. The facilitation process helped the medical students understand what to expect in university learning by introducing them to activities such as reading paragraphs, summarizing information, and engaging in narrative, role play and ‘forum theatre’ activities.

One of the facilitators described the progression of activities within the facilitation process as a representation of a gradual transition, akin to the five-year university experience, starting from understanding paragraphs to eventually becoming more involved in narrative, role play and theatrical activities as they progress through medical curriculum.

3. Engagement and progression: Participants observed varying levels of engagement and progression among medical student groups. While some groups showed eagerness to participate and express opinions from the beginning, others required guidance and encouragement. The facilitation process facilitated a gradual change and progression among participants, representing the different stages of learning over time.

“The students told me that they were able to overcome their nervousness by this program and were feeling more determined to learn at the end. They further told that they enjoyed the program and we witnessed how they enjoyed.”

“It was a gradual change in students’ behaviour that I noticed similar to the change in behaviour of medical students over their 5-years of training in medical school. In first year, it was more about reading paragraphs and reading pictures to assimilate more theoretical knowledge, followed by developing their abilities to narrate stories of patients. Subsequently, they engaged in theatrical activities and finally, they had the opportunity to become the doctors themselves by role-play activities. It represented the five years of medical school learning.”

4. Overall program effectiveness: The study participants collectively assessed the program’s effectiveness, considering factors such as engagement, progression, and preparation for university learning. They conclude that the program was effective, attributing its success to the gradual progression of activities and its representation of the five-year university experience.

These themes highlight the participants’ reflections on their first-time experience, the effectiveness of the facilitation process, and the program’s role in preparing them for university learning (Figure 1). They also illustrated the importance of active involvement, progression, and engagement in the learning process.

Direct observation of the facilitation process by the study participants

The participants were noted to be enthusiastic in facilitating the learning process of medical students in all five methods of learning through reading paragraphs and imaging, narratives, forum-theatre and role-play. They were noted to be supportive and empathetic towards the diversity in students’ abilities, language proficiency in English and active participation in learning activities. Team-work and responsibility sharing were encouraged and the students were provided with constructive feedbacks following their performances. The students were noted to have a varying competency in English language as their native languages were Sinhalese, Tamil

and Bhutanese (Dzongkha). Lack of competence in English was noted to be a barrier for effective communication amongst the students. The

facilitators were seen to be insightful of this barrier and provided encouragement to the students to facilitate active learning.

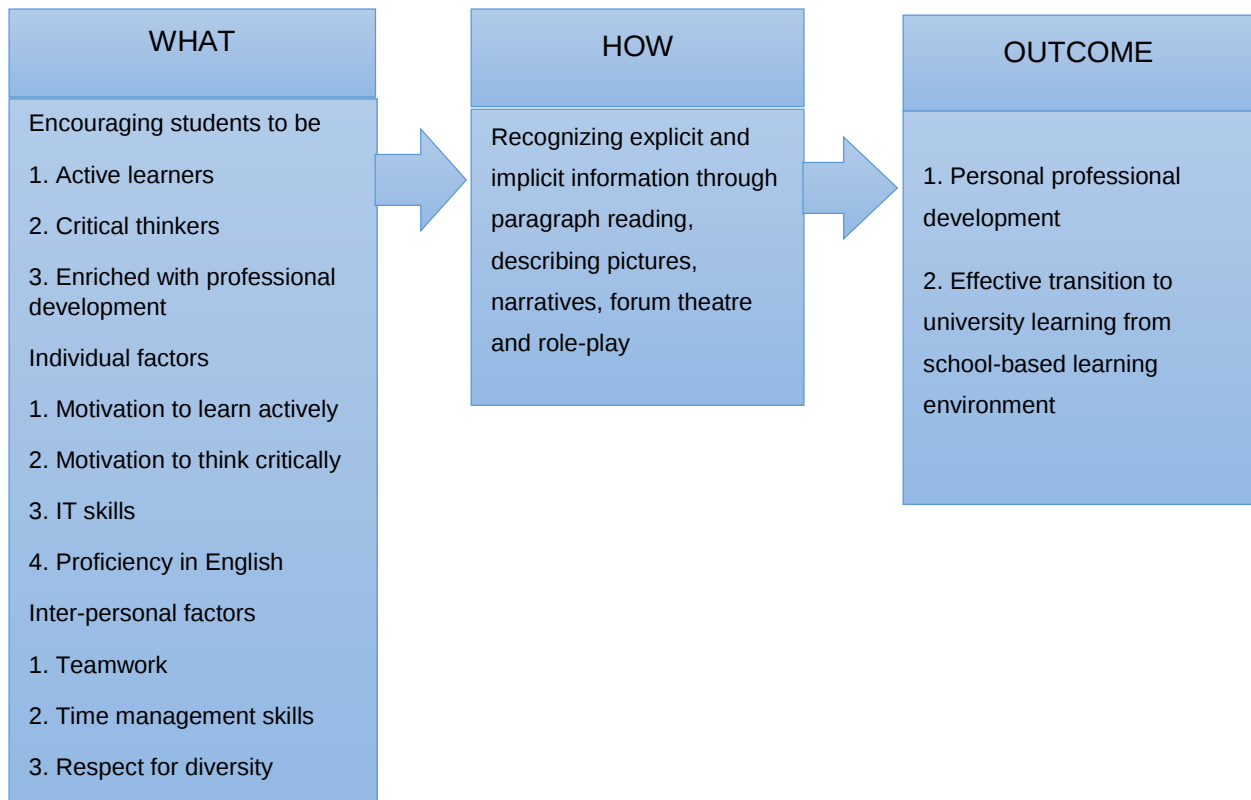


Figure 01: Key elements of the participants' reflections on their first-time experience, the effectiveness of the facilitation process, and the program's role in preparing them for university learning

Discussion

Facilitation has the potential to bolster experiential learning within medical education, yet it often demands substantial resources. Studies suggest that alternative strategies such as hiring external experts such as alumni and creation of apps as potential solutions for mitigating this barrier (McKeen, 2018). An effective remedy for this challenge could involve training junior medical graduates to fulfil facilitator roles. The observations of the current study revealed that fresh medical graduates can be trained to facilitate the proposed blend of five innovative active learning methods to enhance critical thinking and personal professional development in fresh medical students with high levels of acceptance and facilitator satisfaction.

Facilitators must possess the ability to establish safe, trusting environments for students. Several studies have described how students can be effectively trained to facilitate training programs that are designed for junior students of different disciplines (Anderbach, 2006; Barrasso, 2021; Linh, 2019). However, this practice has limited evidence in delivering medical education specially as a method of experiential learning. The success of facilitation is determined by effectiveness of the facilitator training program and the skills of the facilitators (Thomas, 2006; Schwarz, 2017).

The current study revealed that the facilitators felt empowered following exposure to the facilitator training program and acknowledged that learning about how one learns was a new experience

which they were not exposed to during their student life. Qualitative studies suggest that effective training programs help the facilitators to familiarise with other facilitators and share their thoughts and experiences with others (Veine 2023). Cultural diversity is reportedly a barrier for effective facilitation and building trustworthy relationships (Schein 2009). However, the current study revealed that similar barriers could be overcome by training of the facilitators on communication skills to adapt to cultural diversity,

The current study is unique in that the study examined the experiences of facilitators on five innovative learning methods applied on the first-year medical students – paragraph reading, constructive use of medical images, narratives, forum theatre and role play. Our study illustrates that becoming proficient in facilitation entails a developmental journey. Despite the time constraints of the training program for facilitators, we posit that it offers a solid foundation for facilitating team dynamics, especially when coupled with a structured facilitation practice delineating responsibilities and methods. Drawing from our empirical findings, we additionally assert that the experiential learning approach employed in the program is well-suited and productive for helping the medical school new comers in adapting to university learning from the traditional school-based education. Other qualitative studies have also made similar observations when applied in different disciplines (Veine, 2023).

Schombs *et. al*, in their qualitative study on adopting forum theatre to address bias in multi-cultural settings concluded that it was an effective and more engaging experience to promote dialogue amongst health professionals as compared to traditional educational models. It was observed in our study that many facilitators felt positively in adopting Forum Theatre to bridge the gap seen amongst patients and health staff due to socio-cultural and economic inequity. Since forum theatre was conducted by the students themselves on the second day of the training program, the facilitators noted that the education model was able to encourage self-

reflection, self-realisation and self-driven education in medical students. Further, forum theatre was an effective way of improving creativity and engagement of medical students in active learning at a very early stage of medical education.

Liao *et al.* effectively utilised narratives to enhance empathy, self-reflection, narrative writing skills and communication skills amongst a group of health professionals. Narratives are enriched with patient's emotions thus they encourage the students to think beyond the patient's physical illness and disease framework. As opposed to disease framework, insightful understanding of the patient's illness framework helps medical students to realise patient's social circumstances and psychological experiences. The constructive use of medical images is also a recognised effective method of medical teaching (Norris 2012). The medical images can be used to create stories of patients and encourage critical thinking. They are also used as icebreakers at the start of a presentation motivating the participants to listen, engage and learn actively.

This study is limited by its small sample size, which restricts the generalizability of the findings. Moreover, the long-term impact of the innovative learning methods on student learning and professional growth remains unexplored. Addressing these aspects in future research would provide a more comprehensive understanding of the intervention's outcomes. Despite these limitations, the study presents unique and creative approaches to medical education, offering valuable insights. Expanding the sample size in subsequent studies and exploring the long-term effects of these methods will strengthen the evidence base and contribute further to the field.

Conclusion

Our findings endorse the notion that facilitator training can strengthen the facilitation skills for delivering programs that enhance critical thinking and active learning amongst first year medical graduates. The opinions of the facilitators who

were newly passed out medical graduates suggested that with enthusiasm and motivation, junior health professionals could be effectively trained to be facilitators in resource limited settings. The educational program strived not only to enhance facilitation skills but also to incorporate perspectives of active learning, critical thinking and personal professional development fostering a more coherent and unified approach to adapting to the university learning.

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